

AMSAT News Service Weekly Bulletins

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AMSAT NEWS SERVICE

ANS-134

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor <http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php> *
* for the latest AMSAT at Dayton news and developments *

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SB SAT @ AMSAT \$ANS-134.01

ANS-120 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 134.01

From AMSAT HQ SILVER SPRING, MD.

May 13, 2012

To All RADIO AMATEURS

BID: \$ANS-134.01

14 May Reservation Deadline for AMSAT/TAPR Banquet at Dayton

The sixth annual joint AMSAT/TAPR Banquet will be held Friday evening, May 18, 2012 during the Dayton Hamvention.

The Banquet will be at the:

Kohler Presidential Banquet Center
4572 Presidential Way
Kettering, OH 45429
(just south of Dayton).

Reservations are required and must be made by Monday, 14 May 2012.
Seating is limited, so make your reservations early.

The price for the Banquet is \$30 per person. Reserved tickets may be picked up at the AMSAT booth at Hamvention on Friday, or at the door.

You may make reservations for the 2012 AMSAT/TAPR Banquet online in the AMSAT Store. AMSAT Presidents Club Gold members should let Martha know if they are planning to attend the banquet.

For additional information contact Martha at the AMSAT office (martha at amsat.org).

Banquet Schedule

- + 6:30 PM: Doors open and Cash bar is available with Beer, Wine, Liquor and soft drinks.
- + 7:15 PM: Buffet Dinner service begins. The Center has a justly deserved reputation for good food and service.
- + 8:15 PM: Presentation by Howard Long, G6LVB
Howard will be talking about his FUNcube Dongle, the 64 - 1700 MHz Software Defined Receiver. This innovative USB device is the size of a thumbdrive and has an SMA antenna socket. Multiple SDR control and display software programs can be used with the FUNcube Dongle.

[ANS thanks Gould Smith, WA4SXM for the above information]

AMSAT Theme at Dayton 2012: Running with Fox

The 2012 Dayton Hamvention will be held this year on 18 - 20 May 2012. As has been the case for the many years Hamvention will be at the Hara Arena Complex on the north side of Dayton. AMSAT will occupy the same booths (444-449) in Ball Arena, right across from the ARRL area and just inside the door from the Satellite Demonstration area.

The AMSAT theme for 2012 is "Running with Fox". We will have multiple exhibits of the new AMSAT satellite on display.

Visit AMSAT's Dayton Hamvention page for all details on activities:
<http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php>

Some of the activities will include:

- + Life size Fox models will be on display as well as diagrams of the modules inside the 10cm square satellite.
- + Operational prototype of ARISSat-1 on display.
- + AMSAT Thursday Night Get-together at the Tickets Pub & Eatery.
- + The sixth annual AMSAT/TAPR Banquet will be Friday night May 18 at the Kohler Banquet Center. The price for the Banquet is \$30. Seating is limited and reservations are required. Follow the links on AMSAT's Dayton page.
- + The AMSAT Forum will be on Saturday May 19.

AMSAT/TAPR Friday Night Banquet

AMSAT/TAPR Banquet on Friday night, May 18 is one of the main AMSAT activities during the 2012 Hamvention at Dayton.

AMSAT is pleased to announce that Howard Long, G6LVB will be the featured speaker for the evening event. Howard will be talking about his FUNCube Dongle, the 64 - 1700 MHz Software Defined Receiver. This innovative USB device is the size of a thumbdrive and has an SMA antenna socket. Multiple SDR control and display software programs can be used with the FUNCube Dongle.

Banquet tickets will not be sold at the AMSAT booth during the Hamvention so reservations must be made through the AMSAT Store:
<http://www.amsat-na.com/store/item.php?id=100158>
Tickets are \$30 apiece.

ARISS Mentor Introduction at Dayton 2012

AMSAT and ARRL are teaming up during the 2012 Hamvention to recruit new ARISS (Amateur Radio on the International Space Station) Technical Mentors and Ground Station Operators.

Friday and Saturday (May 18 & 19) at 4pm in the ARRL stage area AMSAT Vice President for Educational Relations Mark Hammond N8MH will explain the need for additional ARISS Technical Mentors and Ground Station Operators and the requirements and responsibilities needed to help provide a reliable conversation between astronauts and selected schools or groups.

Technical Mentors serve as an advising and coordinating liaison between NASA, the school or group making the ARISS contact, and the Ground Station Operators, who set up the satellite station at the contact location. We encourage anyone interested in helping make future school contacts with the ISS successful to please attend.

AMSAT to Facilitate Student Satellite Contacts

AMSAT is encouraging all students attending the 2012 Dayton Hamvention to come by the Satellite Demonstration Area just outside of the Ball Area entrance and make a contact using the amateur satellites. There will be AMSAT volunteers there to explain how to make the contacts and during actual satellite passes will try to get as many students as possible to complete actual contacts. There are lists of satellite pass times in the satellite demonstration area and at the AMSAT booth.

[ANS thanks Gould Smith, WA4SXM for the above information]

TAPR Forum at Dayton Hamvention

TAPR will be found in booths 455-459 in the Ball Arena of the Hara Arena at the Dayton Hamvention. They will be near AMSAT who will be found in booths 444-449 in the Ball Arena.

TAPR will feature several SDR projects which are gaining interest quickly in the amateur radio community. Details of TAPR projects and the group's plans for Dayton can be found in the PSR Digital Journal. The Spring 2012 edition is now available for download from:
<http://www.tapr.org/psr/psr118.pdf>

The TAPR Forum gets underway in Room 1 of the Hara Arena at 9:15AM

on Friday and runs until 11:15 AM. The TAPR Forum speakers include:

- + Introduction and TAPR Update by Steve Bible, N7HPR
- + Beyond openHPSDR: Hermes and the Future by Scotty Cowling, WA2DFI.
Hermes is the latest addition to the openHPSDR stable of boards.
- + Embedded DSP for PCless SDR" by Lyle Johnson, KK7P. Self contained radios have been standard since the mid-1920s. Why should SDRs be different? For many applications especially portable operation not having to lug a PC around, or try and read its screen in bright ambient light, or depend on a laptop's battery charge level can be decided benefits. Advances in DSP technology allow self contained, highly portable SDRs that provide many hours of operation on small, internal battery packs.
- + Time and Frequency Update by John Ackermann, N8UR. After some down time, the TAPR T&F project list is moving forward. This presentation will discuss the new TADD2 Mini frequency divider that is now shipping, and will give a glimpse of new products in the pipeline.
- + CODEC 2 by David Rowe, VK5DGR. Codec2 is an open source low bit rate speech codec designed for communications quality speech at 2400bit/s and below. Applications include low bandwidth HF/VHF digital radio and VOIP trunking. Codec 2 operating at 2000 bit/s can send 32 phone calls using the bandwidth required for one 64 kbit/s uncompressed phone call. It fills a gap in open source, free as in speech voice codecs beneath 5000 bit/s and is released under the GNU Lesser General Public License (LGPL).

[ANS thanks TAPR President Steven Bible, N7HPR and Stan Horzepa, WA1LOU for the above information]

Vietnam F-1 Cubesat Team Completed Successful Communication Test

Hanoi based FSpace team completed another important milestone in preparation for the July 18 launch when they successfully performed a long range communication test of F-1 CubeSat with a ground station at a distance of 50km. The team carried the little satellite to top of Tam Dao mountain in Vietnam (about 1300m high). A communication link of 50km with the ground station at the FPT building in Hanoi was established. Despite of heavy fog and high humidity (which was very bad for radio communication) the ground station successfully sent uplink commands to F-1 and the satellite responded correctly, reporting its status and taking some photos.

F-1 is one of five CubeSat teams preparing for a launch to the International Space Station in the July 18-21, 2012 time frame. These CubeSats will be launched from Tanegashima, Japan aboard the JAXA HTV-3 ISS resupply mission. The CubeSats will be loaded into the J-SSOD deployer on the Japanese Experiment Module, also known as Kibo. They will be deployed with the Kibo robotic arm planned for September, 2012 timeframe.

Other cubesats on this flight include:

- + HTV 3 (Kounotori 3)
- + Raiko
- + We Wish
- + FITSat 1

+ TechEdSat

The F-1 Cubesat team posted photos at: <http://fspace.edu.vn/?p=557>.

[ANS thanks the F-1 Cubesat Team for the above information]

15 May Deadline to Apply for ARRL TI-2 Space in the Classroom Institute

The ARRL Education & Technology Program (ETP) is offering an advanced Teachers Institute (TI-2) session that focuses on space in the classroom. This four-day professional development workshop is sponsored by the Dayton Amateur Radio Association and is held in their location in Dayton, Ohio (July 9-12).

The TI-2 Space curriculum focuses on the nuts and bolts of setting up and operating a satellite ground station. This serves as excellent preparation for a scheduled contact with the ISS through the Amateur Radio on the International Space Station (ARISS) program. But it also provides instruction for continued use of satellites and other man made space assets to explore naturally generated signals, space and a variety of topics.

Thanks to generous assistance from Yaesu USA and Ham Radio Outlet, participants will receive a full ground station that is configured for satellite communications, as well as training on how to set it up and use it to make Amateur Radio contacts and download telemetry data.

To be considered for a seat in TI-2 Space, participants must possess at least a Technician class license at the time of application. ARRL membership is required. Priority for attending the TI-2 Space session will be given to teachers who have developed an educational proposal accepted for participation in the ARISS Program.

This session has a class limit of 8 participants, so apply early! The deadline for the TI-2 Space in the Classroom sessions of the Teachers Institute is May 15. This deadline is this week ... hurry!

Full details are posted on the ARRL web at:
<http://www.arrl.org/ti-2-space-in-the-classroom>

[ANS thanks the ARRL for the above information]

NASA TV to Broadcast Three Hams Launch From Baikonur

The next mission to the International Space Station will have three crew members who are licensed amateur radio operators. The crew consists of NASA Flight Engineer Joseph Acaba, KE5DAR, and two Russian crewmates, Soyuz Commander Gennady Padalka, RN3DT, and Flight Engineer Sergei Revin, RN3BS.

NASA will televise the launch and docking of the next mission to the ISS, scheduled for May 14, with live NASA TV coverage of the Soyuz TMA-04M spacecraft launch from the Baikonur Cosmodrome in Kazakhstan. Coverage begins at 9 PM CDT on Monday, May 14 (0200 UTC May 15), with the launch scheduled for 10:01 PM CDT (0301 UTC).

The trio will arrive at the station May 16, joining Expedition 31 Commander Oleg Kononenko, RN3DX, of the Russian Federal Space Agency, Flight Engineer Don Pettit, KD5MDT, of NASA and Flight Engineer Andrei Kuipers, PI9ISS, of the European Space Agency, who have been aboard the ISS since December 2011. Padalka, Acaba and Revin will transition to the Expedition 32 crew in July and return to Earth in mid-September.

NASA TV Schedule

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- + Monday, May 14 - 9 PM CDT (0200 UTC May 15)
Soyuz TMA-04M launch coverage (launch scheduled at 10:01 PM [0301 UTC]), including video of the crew's pre-launch activities and launch replays.
 - + Tuesday, May 15 - 12 AM CDT (0500 UTC)
Video file of Soyuz TMA-04M pre-launch, launch video and post-launch interviews.
 - + Wednesday, May 16 - 11 PM CDT (0400 UTC)
Soyuz TMA-04M docking coverage (docking scheduled at 11:38 PM [0438 UTC]), followed by a post-docking news conference from Mission Control in Korolev, Russia.
 - + Thursday, May 17 - 2 AM CDT (0700 UTC)
Soyuz TMA-04M hatch opening and welcoming ceremony (hatch opening scheduled at 2:20 AM [0720 UTC]).
4 AM CDT (0900 UTC) - Video file of Soyuz TMA-04M docking, hatch opening and welcoming ceremony.

You can watch live online on the NASA TV Public and Media channels, streamed live on the internet at <http://www.nasa.gov/ntv> or on your television set if your local provider carries the NASA TV channel in your area.

[ANS thanks the ARRL and NASA for the above information]

Satellite Shorts From All Over

- + AMSAT-UK posted a video made by Alexandru Csete OZ9AEC demonstrating the interference caused by FM emissions on the F0-29 linear transponder. Alexandru used the AMSAT-UK FUNcube Dongle and Gqrx SDR software to receive and record the signal. The video is posted at: <http://www.uk.amsat.org/7260>
- + Doug McArthur, VK3UM announced a software update to the VK3UM EMR Calculator program. The EMR (Electro Magnetic Radiation) software Version 7.00 has been revamped and enhanced for improved ease of use. It includes many examples, references and a Help file. It covers ARPNSA (Australian), FCC, and CEU Radio Frequency Emission Standards. It may also be configured for any other requirement outside the above Standards i.e. Russian Federation. Doug has several other programs such as his EME Calculator available for download on his website at: <http://www.vk3um.com/>
- + Hams like science, so enjoy these scientific music videos in the shack. The Symphony of Science is a musical project of John D Boswell, designed to deliver scientific knowledge and philosophy in musical form. See: <http://symphonyofscience.com/>

+ In his latest Science Off the Sphere video from the ISS, astronaut Don Pettit, allows us to 'see' sound waves in space. Watch and learn on-line at: <http://www.physicscentral.com/explore/sots/>

[ANS thanks everyone for the above information]

ARISS Status - 7 May 2012

1. ARISS - Virginia Contact Successful

On Wednesday, May 2, the Mariners' Museum in Newport News, Virginia experienced a successful Amateur Radio on the International Space Station (ARISS) contact with Don Pettit, KD5MDT via telebridge station IK1SLD in Italy. Groups in Virginia, Louisiana, New York, and Michigan were video conferenced together for the event. Approximately 350 students at the four locations got in seventeen questions before ISS went over the horizon. The contact highlighted a comprehensive Science, Technology, Engineering and Mathematics (STEM) education plan.

2. Ham Nation Features Flabob Contact

The ARISS contact with Astronaut Don Pettit and Flabob Airport Preparatory Academy students in Jurupa Valley, California that occurred on April 19, 2012, was featured on the May 1 episode (#46) of the Bob Heil & Gordon West "Ham Nation" video podcast. The video is now available on TwiT TV and Flabob sites.

Ham Nation: <http://twit.tv/hn>

Flabob site: <http://www.iss-flabob.com>

3. Astronaut Training Status

An introductory/basic operations session is planned for Alexander Gerst, KF50N0 on Wednesday, May 9. Gerst is scheduled to fly with Expedition 40 in May 2014.

[ANS thanks Carol, KB3LKI, for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU40S